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# The Tech News Volume 23, Issue 18, March 22 1932

The Students of Worcester Polytechnic Institute

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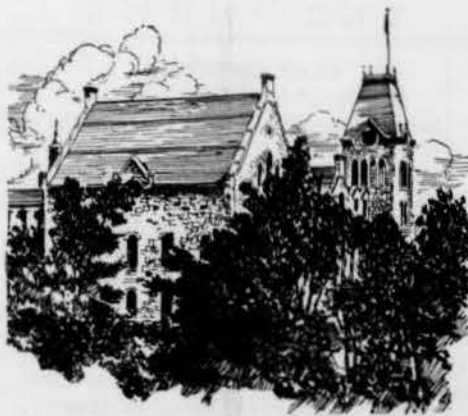
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# TECH



# NEWS

VOL. 23

WORCESTER, MASS., MAR. 22, 1932

NO. 18

## "MORALE, AN ATTRIBUTE OF LOYALTY" IS THE SUBJECT OF PRES. EARLE

Chapel Address Given Monday in Sinclair Hall Proves To Be an Interesting Talk

### LOYALTY TO AN INDIVIDUAL IS STRESSED AGAIN IN CHAPEL

I have discussed many times at Chapel the value of loyalty to an individual in connection with his life work. Loyalty is also an extremely desirable attribute of any organization when it is known by the name of Morale.

Morale is rather intangible, but is a wonderful possession, one that varies in degree, but when of the highest, makes an organization irresistible, no matter what it is doing.

In the study of military strategy, we are often told that Napoleon claimed that the value of morale was to the physical value, that is power and in armament of armies, in the proportion of three to one. This is a statement often quoted, but I find that Hannibal expressed exactly this idea to his troops when he conquered Italy, so that morale is a quality not new in organization, but one that has been eagerly sought by leaders for years and years. There comes to one many examples of morale, which explain, of course, what morale is. I have just visited Newport News, and in its Apprentice School, I found an astonishingly high morale there. It is necessary, of course, to have leaders in order to have morale and yet something more than leaders are necessary—it is essential to have one or more heroes to look up to in order that this morale may be stimulated and kept alive.

In the case of the Apprentice School at Newport News, it seems there has been an apprentice named "Red" Lewis, from a little fishing village near Newport News, who came for employment as an apprentice in order that he might support his widowed mother. He was sixteen years old, red-headed and freckled faced, and handicapped in proper school training. However, he attended to his business, and his school rating was well up in the list, his shop reports especially were always good, and he developed into an all-round young man, being the football captain of 1922, and playing a splendid game in that sport as well as in all others. However, at the end of October of that year, when he was only about twenty years old, he fell on a big planer in the machine shop and was terribly cut. I spoke to the nurse, to whom he was brought, and she remembers that he, although in terrific pain, told her not to worry about him at all, but try and calm his mother.

His mother arrived, and he said not a word about his death, which was a matter of but a few moments, but cheered her as well as he could.

He died in agony, but left an example to the apprentices as a real leader, a four-square Christian boy.

It seems that they have honored him and perpetuated his memory in bronze and consider "Red" Lewis the embodiment of the real school spirit.

(Continued on Page 3, Col. 3)

## SKEP. CHYMISTS HOLD MEETING

Bicknell and Romanoff Present Interesting Talks

A Skeptical Chymists meeting was held last Wednesday evening, March 16, in the Salisbury laboratories with Leighton Jackson, '33, presiding. The first speaker of the evening was Alfred Bicknell, who gave an interesting talk on his experiences in an Industrial laboratory at Portland, Maine. The mill with which this laboratory is connected manufactures paper, especially the kind used for magazine covers. Mr. Bicknell has worked with that concern for three summers. The first summer he was employed in the research laboratory, working on adhesives and coatings for papers. He told of the processes and tests applied to the paper in the laboratory. When good results are obtained they are sent to the mill. The main problem in the coating is to get a liquid which will stick well to the paper, be the right weight, and be perfectly white and waterproof. The paper must also take ink well. The second summer Mr. Bicknell worked in the mill where paper is turned out on a large scale. He worked mostly on the moisture content of the paper, and in his talk he explained how moisture tests are carried out and ways which give the best results under prevailing conditions. Many precautions must be taken in the mill and laboratory in order to insure safety. Everything is charted in the Industrial laboratory and only a few experiments are necessary to obtain results.

The second speaker at the meeting was Elijah Romanoff who gave a talk on anesthetics. He sketched the history of anesthetics from the time when a sick patient was given a terrible tasting liquid to cure him and the person was in great pain during the process. It was also necessary for the doctor to be quick because the patient was not unconscious. The first real important anesthetic was ether. Since then there have been many others developed, including local anesthetics such as cocaine, and general anesthetics like morphine and chloroform. In some cases both are used for the same operation. After this history Mr. Romanoff enlarged on one of the more modern anesthetics, sodium emitol, used in obstetrics. All anesthetics have advantages and disadvantages. The great advantages of this one are: it can be taken either through the mouth or injected.

(Continued on Page 2, Col. 3)

### FRESHMEN

More reporters are needed on the NEWS. Assignments are given out Monday at 4 P. M. in B19.

### CALENDAR

#### TUESDAY, MARCH 22:

9:50 A. M.—Chapel Service, Rev. Thomas S. Roy.  
4:00 P. M.—Interfraternity Bowling, P.S.K. vs. Friars.

#### WEDNESDAY, March 23:

9:50 A. M.—Chapel Service, Rev. Dr. Wm. Mitchell.  
4:00 P. M.—Interfraternity Bowling, A.T.O. vs. S.A.E.

#### THURSDAY, MARCH 24:

9:50 A. M.—Chapel Service, Rev. Dr. Maxwell Savage.  
4:00 P. M.—Interfraternity Bowling, T.X. vs. T.U.O.  
4:30 P. M.—Glee Club Rehearsal, Gym.

#### FRIDAY, MARCH 25:

9:50 A. M.—Chapel Service, W. P. I. Quartet.  
4:00 P. M.—Interfraternity Bowling, S.O.P. vs. Friars.

#### SATURDAY, MARCH 26:

8:30 P. M.—Dormitory Dance.

#### MONDAY, MARCH 28:

9:50 A. M.—Chapel Service.  
4:00 P. M.—TECH NEWS Assignments—B19.  
4:00 P. M.—Interfraternity Bowling, P.G.D. vs. T.U.O.  
4:30 P. M.—Glee Club Rehearsal, Gym.

## THETA CHI AND T. U. O. STILL TIED

Theta Chi Rolls New Record Pinfall of 1137

T. U. O. and T. X. are still tied for first with A. T. O. close behind.

Much interest has been aroused by the hard fight between Theta Chi and Theta Upsilon Omega for the leading position, both being tied with an average of .700 games won. Alpha Tau Omega is making a strong bid for the cup with their score of .650.

Last Monday was a capital day for P. G. D., when they succeeded in breaking their jinx and beat S. A. E. 4 to 0. On Tuesday S. O. P. rolled the highest pinfall so far during the matches, their 1087 enabled them to down P. S. K. 3 to 1. A. T. O. raised their standing appreciably on Wednesday with a 4 to 0 victory over the Friars. The match Thursday saw the pinfall record of S. O. P. raised to 1137 by the strong T. X. team. They beat L. X. A. with a 3 to 1 score. After losing the first string, T. U. O. brought Friday to an end with a 3 to 1 win over S. A. E.

### TEAM STANDING

Team	Points	Points	Av.
T. U. O.	14	6	.700
T. X.	14	6	.700
A. T. O.	13	7	.650
L. X. A.	12	12	.500
Friars	10	10	.500
P. S. K.	10	14	.417
S. O. P.	10	14	.417
S. A. E.	8	12	.400
P. G. D.	5	15	.250

Matches to be arranged this week:

Tuesday, P. S. K.-Friars; Wednesday, A. T. O.-S. A. E.; Thursday, T. X.-T. U. O.; Friday, S. O. P.-Friars; Monday, P. G. D.-T. U. O.

## ANNUAL BANQUET PLANS INDICATE ROUSING GOOD TIME FOR ALL

All Arrangements Completed and a Good Time is Guaranteed—Entertainment to Feature Skits and Speeches

## BASEBALL SQUAD STARTS PRACTICE

Battery Men Work Out Daily in Gymnasium

Indoor practice for the baseball team has been going on in the Alumni gymnasium for the past week, and a squad of about thirty players has been warming up their arms. Among this number are several members of last year's team together with the new men. At present the squad consists of the following infielders: James Leach of Gardner, William Asp of Worcester, Irving Gartrell of Turners Falls, and George Makredis of Lynn for the veterans; and William Butler of Worcester, George Stevens of Whitman, Warren Saltmarsh of Suncook, N. H., Floyd Hibbard of Seymour, Conn., Theron Cole of North Carver, Richard Duvall of Brooklyn, Franklin Angevine of Attleboro, and John Tinker of Nashua, N. H., for the new players. The outfielders consist of Captain Bertrand Lanciault of Worcester, John Noreika of Worcester, George Sargent of Wrentham, Alfred Cantor of Mattapan, John O'Shea of Worcester, Everett Sanderson of Wayland, Gordon Lincoln of New Bedford, and Donald Greenwood of West Boylston. Nicholas Mango of Westfield, Raymond Starrett of Athol, Stanley Swipp of Worcester, and Evan Luce of West Boylston are the new catchers, while Johnny Molloy of Hartford, Conn., is the only backstop from last year's team besides Lanciault. The pitching material consists of one letterman, Russell Purrington of Shattuckville, Roman Koziol of Southbridge, a sub last year, Horace Terry of Orient, N. Y., Orrin Lee of South Hamilton, Frank Holmes of Norfolk, and Willy Hebel of South Glastonbury, Conn.

From this aggregation Coach Bigler hopes to put forth a winning team. The pitching department lost "Lefty" Anderson through graduation last June, so that Purrington and Koziol will probably do the bulk of the mound work for Tech. Anderson twirled in the majority of the contests last year and Purrington pitched most of the remaining games. Captain Lanciault had the regular catching job, with Molloy assisting, but towards the end of the season he was shifted to the outfield. It is not known yet which position he will play this spring. This year's infield, with Asp, Leach, Gartrell and Makredis as the leading candidates is very strong.

Although the weather has been far from baseball weather for the past few days, the indoor practice is coming along in great shape and the whole team is fired with pep and enthusiasm. As soon as the weather warms up and the field is dry, practice will shift to less restricted regions and the National Pastime will begin at Worcester Tech.

## ALL TICKETS MUST BE PURCHASED BEFORE MONDAY, MARCH 28

The time is rapidly approaching when Tech men should be seriously considering the Tech Banquet which will be held this year on Wednesday, March 30th, at 6:30 P. M. in Sanford Riley Hall. This banquet is one of the earliest of Tech traditions. In previous years it has been a grand success and plans for this coming banquet insure any man of a very interesting evening at a surprisingly low expense; the price of the ticket being seventy-five cents. This is an extraordinary opportunity to join in festivities of over par value and at a saving of half a dollar. The cost of the banquet is one dollar and a quarter but through the courtesy of the Tech Book Store you have only to find seventy-five cents and they will stake the rest on your good time. Of course, a banquet does not mean just something to eat. We have more than just that to offer.

The speakers for the evening are President Ralph Earle and Doctor Bryan of the Worcester State Hospital, who will speak on "Peculiar Personalities and How We Get That Way." This promises to be an excellent topic and should prove very entertaining as well as interesting. For toastmaster "Don" Smith will do the honors and we do not anticipate any dull moments under his guidance.

All of the entertainment does not come to the ears for as usual there will be skits put on by the odd and even classes. These are according to custom and will probably be unusual rather than usual.

At a recent meeting of the Tech Council, it was voted to award a plaque to the winners of the skits. This is to be engraved with the numerals of the winning classes and to be hung in the gym through the year. The classes work in pairs, odd and even. The men in charge of these skits are, for the even team, Tom Ratkiewicz, '34, and a senior, not yet appointed. For the odd, are John S. Maloney, '33, and Homer Morrison, '35. These skits usually prove quite interesting and there is no doubt that they will add greatly to the spirit of the occasion. The judges are Professor F. M. Roys, Head of the Department of Mechanical Engineering; Professor T. H. Morgan, Head of the Department of Electrical Engineering, and M. L. Price, Instructor in Mechanical Engineering.

In order to ascertain the number of places to be reserved for the banquet all tickets must be bought by Monday, March 28th. The many representatives who are selling tickets will gladly serve you on or before that date. Let's all get together and push the Tech Banquet through to another very successful evening.

**GET YOUR BANQUET TICKETS BEFORE MARCH 28**



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March 22, 1932

## HOLY WEEK CHAPEL SERVICE

In preparation for Easter, which will be celebrated next Sunday, churches and other religious organizations throughout the christian world are observing Holy Week. It is a time when everybody, no matter how pressing business or studies or any other of the material factors of life may be, should take some active interest in his religion. The religious side of the life of Tech students is left largely in their own hands. They are at liberty to attend such services as they see fit. There are no compulsions. Some attend church regularly, others only occasionally, and it is probable that there are some who have not been in a church since school opened last fall. It is unnecessary to urge the first group to take part in the Holy Week activities for they will do it voluntarily. However, for the other groups, some means is necessary to impress upon them the significance of the Easter season.

Such a means has been provided by the chapel services for the week. President Earle was the speaker yesterday, and for the remainder of the week three of the most prominent ministers in Worcester have been secured as speakers. This morning Rev. Thomas S. Roy of the First Baptist Church will give the address. Tomorrow Rev. Dr. William Mitchell of Wesley Methodist Church will conduct the exercises. Rev. Dr. Maxwell Savage of the First Unitarian Church will be the speaker on Thursday. All of these clergymen have spoken here many times before and it is because they have proved especially interesting to Tech students that they have been asked to conduct the Holy Week services. On Friday the chapel period will be devoted to Easter songs by the W. P. I. quartet. Because of the special effort to secure the best speakers and the special significance of the occasion a large attendance at these services would be especially pleasing to President Earle, who has always so enthusiastically sponsored the chapel exercises.

But do not let your observance of Easter end with attendance at chapel. No matter what your religion is, or how long it has been since you last attended church, there will be some church waiting to welcome you next Sunday.

## A NEW COURSE

It has long been recognized that there has been one slight flaw in the otherwise almost perfect training of the students of many technical schools. It is almost universally true that the average engineering student is pressed for time and because of this his courses have been so adjusted as to give him a thorough grounding in only those subjects falling within the immediate scope of his chosen future profession. After graduation, it often developed that while the individual was an excellent engineer, a capable worker, and well versed in matters pertaining to engineering, nevertheless, he was handicapped by a lack of knowledge of the methods of business administration, banking, public relations, management of personnel, and accounting. Since a large proportion of the graduates of engineering schools do not remain long within the field for which their training has fitted them, but drift into sundry other occupations, usually of a business nature, this discrepancy in preparation becomes a serious problem and a handicap to them.

It has been a fairly well known fact that this condition existed here at Tech. The situation has been studied by the faculty and corrective measures have been taken. Excellent courses in economics and business law have been developed, and because it was not possible to extend these courses so as to supply information along all of the afore-mentioned lines, a new course has been created. This course is designed to give the students some general knowledge of accounting, cost accounting, business enterprises, banking and financing, plant location and layout, personnel problems, and business statistics. The lack of just such a training as this course will afford has constituted the sole real basis for numerous claims to superiority on the part of another engineering school located in this state.

The new course will not add greatly to the burden of the individual student as it will replace the several scattered and inadequate courses along these lines which are now offered by several of the departments; and, while a few may complain at the addition to their already crowded schedules, the reception of the new course by the majority of the student body will be an enthusiastic one.

## SKEP. CHYMISTS

(Continued from Page 1, Col. 2)  
in a vein, depending upon the condition of the person; it is very pleasant to take; it produces no harmful after effects such as nausea or other sickness; it is readily rejected from the body afterwards. Sodium emitol has been used in 3,000 cases already, and has been very successful. The speaker had much interesting information on anesthetics, and after the talk there was an open discussion. This discussion was centered largely on Bernard's theory that narcosis is caused by the coagulation of the brain cells. Mr. Romanoff also told some amusing stories about experimenting on cats with chloroform.

After the meeting was adjourned refreshments including ice cream and cookies were served. Mr. Jackson announced that membership shingles were to be given out in the near future to those who had earned them.

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Camera Club Hears Dr. Milligan of Norton Co.

On Wednesday March 16, a very well-attended meeting of the Camera Club was held in the library of the Mechanical Engineering building, with Veikko Marshall presiding. The date of the photographic exhibition which is to be held by the club, was announced to be April 20 and 21. The exhibition, which will include the best work of the members for the past year, is to be held in the reception room of the gymnasium. Enlargements, gum prints, and prints are to compose the selection, with the subject matter to include largely views of the campus as well as a few unique poses of faculty members. To stimulate interest in the preparing of photographs for the exhibition, a prize is to be awarded for the picture showing the best treatment. This is to be judged by Mr. McAllister of the Freeman Camera store, Dr. Milligan of the Norton Camera Club, and a third judge yet to be chosen, and should provide some interesting competition, in-

identally making a very good selection of pictures well worth seeing.

The business of keys for the new dark room was brought up and as a result, the keys are now being distributed to club members by William Mesh, the club treasurer. It was announced that the dark room committee is making some purchases to complete the equipment of the dark room. These will include several lanterns, masks, graduates and ruby glass for the lanterns.

After the business was concluded, Prof. C. J. Adams, faculty advisor of the club, announced the speaker of the evening, Dr. Milligan of the Norton Camera Club. Dr. Milligan gave an extremely interesting talk on the art of preparing photographs for exhibiting purposes. He stressed two main points in the preparation of good pictures; first, simplicity of composition, in letting one object predominate in the picture, and second, care in the taking of the picture, to get the most effective arrangement possible. Dr. Milligan then showed some of his own enlargements, to illustrate the good and bad points of various types of pictures. The meeting was closed with a very interesting discussion among the club members, which was led by Dr. Milligan.

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## NEW SENIOR COURSE WILL BE INAUGURATED NEXT YEAR

**President Earle and Professor Richey Make Signal Plans for Course in Elements of Business for the Engineer**

### PROFESSOR RICHEY WILL TEACH COURSE FOR FIRST YEAR AT LEAST

Plans are now nearing completion for a new course of study to be required of all Seniors at the Worcester Polytechnic Institute during the second semester of the year and to be announced in the next issue of the college catalogue as Elements of Business for the Engineer. The course is being formulated by Professor Albert S. Richey, of the department of electrical engineering, in conjunction with President Ralph Earle, and has been authorized by vote of the faculty.

President Earle and Professor Richey have visited several schools of business administration in the East, and studied in detail the courses in that subject offered at many of the leading universities and colleges. The course at Tech will combine the most desirable features of the courses examined, with such modifications and adaptations as seem advisable to meet the conditions at the local engineering college.

The principal problem in the development of the course is how to cover the very broad field in the allotted time, three semester hours. Certain subjects will be included without question, such as accounting, to the extent that the balance sheet and other business statements may be read with some intelligence, and that cost accounting methods may be understood; some financial matters, such as the various forms of participation in business enterprises, and relations with banking and other financial institutions; plant location and layout; personnel problems; business statistics; control of personal finances. It is also probable that some time will be devoted to study of practices in the fields of railroads and public utilities.

"The desirability of some business training along with a technical engineering course probably is conceded both by the engineering alumnus and by the business man who employs young engineers," says President Earle. "There is not sufficient time in a four-year course to give the student as much of a working knowledge of business methods as is attempted in subjects such as mathematics, chemistry, and the various branches of engineering. However, it is felt that the engineering graduate should have at least a bird's-eye view of the many phases of practical business; he should be able to speak, not only the language of the engineer, but also, with some degree of understanding, that of the business man."

As the course is taking shape, it will probably be a combined lecture and practice course, with two lectures and a one-half day practice period each week. In the practice period, as far as possible, problems and cases will be used which apply principles and methods as they are brought up in the lecture course, and such problems will be so handled as to give needed practice in business correspondence and report writing. In fact, throughout the course, special attention will be devoted to those forms of writing most frequently required in the routine work of the business man and the engineer.

While it is not proposed to introduce a formal course leading to a degree in engineering administration, the subject is one which has always been dealt with to some extent in the courses of the several departments. A thorough course in economics and business law has been required of all candidates for a degree, and will continue to be required. In addition, the departments of mechanical engineering, civil engineering, elec-

trical engineering, and chemistry have all devoted much time and effort to instruction in the fundamental business principles involved in engineering practice in their several fields.

The new course, taking the place of these scattered courses, will co-ordinate and unify the work of them all, and will be offered for the first time in the second semester of the next college year. In addition to his work in formulating the course, Professor Richey has consented to conduct it at least for the first year, and will have the assistance of other members of the faculty in handling the practice periods.

His background of experience admirably qualifies him for his new task. For ten years after graduating from Purdue University, and before coming to Worcester Tech, he was with the

Union Traction Company of Indiana, most of the time as chief engineer. Since 1907 he has practiced as consulting engineer, mostly in public utility work. Nearly every electric railway in New England and a large number of utility companies outside, such as those in New York, Chicago, Pittsburg, Cleveland, St. Louis, Washington, Toronto, and Havana, have been among his clients. He has also been retained by the state utility commissions in New Jersey and Tennessee, and by various municipalities, including Worcester, Albany, and Troy.

### PRES. EARLE'S ADDRESS

(Continued from Page 1, Col. 1)

You know these are shipbuilders, and the inscription on a tablet raised in memory of him and those who may die later in duty, reads, "They rest in peace, while the fruits of their labors sail the seven seas."

In other words, the whole spirit of this school is one of honest labor, clean living and fearless dying.

In the naval or military service one has leaders and heroes continually held up to them in order that they may acquire a little of the morale of the navy through tradition.

Of course, there are many traditions, and they all lead to a school spirit—a spirit that is invaluable to all in after-life.

I attended chapel service at Annapolis, Sunday, and looked upon the stained glass presented by the class of '60, which the midshipmen face each Sunday, and which constantly appeals to their comradeship, that is, to their morals.

On the right in the same chapel is another stained glass window called the "Commission Invisible," which represents a young officer standing beneath the colors of his country, gazing at his new commission with our Lord blessing him.

This window was an example of what is meant by morale. The idea back of it was to show the value of the christian spirit to the character of an officer and also the value of united action in our navy.

The window was made possible by the class of 1927, every single man of which contributed to it some fifteen dollars. It was not the amount that each contributed so much as it was the fact that every mother's son in the class, and it was a large class, felt enough true morale to contribute, and

thus perpetuate to those following the spirit of the service.

Here at our college we value the various gifts by classes. The seals in the windows of this room are a great example, the gift of the class of 1930. We know the value of concerted action in various everyday occurrences, all of which are an example of morale.

This morale is necessary to be developed here, for you must have it when you get into business, and you have plenty of alumni to take as your example; in fact, any of the real gentlemen whose portraits you see on the walls of this Sinclair Hall can be taken as good examples, while the acquirement of their best will make you and the organization so fortunate as to have you wish it superior to all.

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# Chesterfield



## TECH BASKETBALL TEAM STARTS SEASON WITH THREE VICTORIES

**Bill Asp Completes Four Years of Varsity Basketball with an Excellent Record**

### TEAM WINS SEVEN GAMES INCLUDING TWO VICTORIES OVER CLARK—LOSES SIX

The Tech basketball team of the past season showed itself to be extremely erratic and temperamental. The squad at times showed real class and at other times, though the players tried as hard, seemed to be the victim of a disastrous number of bad breaks. The men romped to victory over very worthy teams and then when in the throes of that inexplicable condition, which for want of a better term, we call a "slump," they were nosed out or viciously subdued by teams which were of equal worth.

The first three games of the year were highly satisfactory to the followers of Tech basketball. The Tech cagers showed their heels in handy style to aggregations from B. U., Coast Guard Academy and Brown. From then on their course was a series of ups and downs.

In the opening game of the season the Bigler-coached squad functioned with machine-like precision to overcome B. U. to the tune of 34-27. In spite of the fact that Tech was playing on foreign soil, always a handicap, the boys played a fast and deadly certain game.

The prospects for a successful season appeared brighter still when the Boynton Hillers handed the towering C. G. five its first defeat. This mountain of opposition produced a formidable defense early in the game but all went for naught as Tech launched its powerful attack and proved themselves the better team by a 38-26 margin.

Tech's reputation assumed larger proportions when their stellar teamwork, coupled with the outstanding playing of Cullen, Asp, and Smith, completely subdued Brown in a fast, blistering tilt here. The Bears were sent home badly bruised by a 43-25 rebuff.

Once more Tech journeyed to foreign territory to do battle with Tufts. In this game Tech was greatly handicapped by the small size of the floor which threw a monkey wrench into "Pete" Bigler's machine and the final gun found W. P. I. trailing 25-22. The lack of an "eagle-eye" for long shots was keenly felt. Bill Asp did his best in this department as shown by his seven-point personal score which was equaled only by A. Cochrane of Tufts. Again the gods of victory smiled on the Engineers in a fast, exciting tilt with Wesleyan in Alumni Gym. The squad in this game played erratic basketball which at times proved strenuous for the spectators. At times the famed machine coughed and spit but continued to pile up points and finished in the lead by a score of 38-26.

Things began to go badly for Tech when a superior Springfield team subdued them by a score of 43-20. Bill Asp was the outstanding star of the game for Tech, for he broke up plays which would have meant a much larger score for the Gymnasts. Following this game another superior aggregation spelled out defeat for the Engineers. New Hampshire University presented a smoothly functioning and eagle-eyed five who played consistently good ball while Tech seemed to go into a slump in the final quarter. The score stood 33-22 at the final gun.

Against Mass. State Tech again began to function correctly and in the most exciting game to date overcame the Staters 39-31. The first half of this game was quite ordinary and at half-time State led 23-17. The second half was a Tech period and the Engineers proceeded to show exactly how the game should be played. Johnny Smith

was the star of the game, collecting 15 points.

Prospects brightened for Tech when they met their traditional rivals, Clark, in the first game of the series. This game was played in South High gym and excitement wasn't on the order that evening. Fouls were much in evidence, thirty-four being called, but they were most gentle ones. Tech came out on top 36-24.

The worst upset of the season was served by Providence. Three separate teams were put on the floor by these stellar performers and all functioned sufficiently well to put the score at 54-24 at the close. Coach Bigler had lost one of the spark plugs of his machine, in the person of Bill Cullen, and this had a telling effect on the final score.

In a return game with Clark at Alumni gym the Tech basketball team showed what they were made of and in a highly interesting game downed their intercity rivals by a score of 43-23.

Many were the prophecies in regard to the next two games and the majority favored Tech to win both contests. However, the fates had not so decreed and Trinity nosed out the Boynton Hillers 27-23. Tech played a steady game while Trinity played in spurts and, unfortunately, the game came to a close at the end of one of these spurts.

The final game of the year was the best one. In this game R. I. State nosed out Tech 53-49. Excitement and speed vied for a superiority as the players put in an average of a field goal a minute. The game was a fitting ending for the season for it was a battle between two giants of power; and though it was a defeat, it was really the smile of fortune which put R. I. instead of Tech on top of that close score.

The Tech Seconds started their season very well, showing victories over such teams as North, South, Classical and Becker's. They did not have as much success with the rest of the schedule after "Mike" Skwarek and "Sonny" Norton had been promoted to the varsity. There is no less honor due them on that account for some of the teams which they played against were far superior to them.

#### Varsity

	W	P	I.	Opp.
Boston University	35			27
U. S. Coast Guard Academy	38			28
Brown University	43			25
Tufts	22			25
Wesleyan	38			26
Springfield	20			43
N. H. University	22			33
Mass. State	39			31
Clark	36			24
Providence	24			54
Clark	43			23
Trinity	23			27
R. I. State	49			53

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## SWIMMING SEASON POOREST IN YEARS

**Freshman Team Proves To Be a Great Success**

When the varsity swimming team lost to Springfield College on March 5, it concluded one of the poorest seasons a Tech swimming team ever experienced. Only one meet, the first one, resulted in a win. The rest were defeats.

The main cause of this poor record was the ineligibility of most of the Seniors, due to the three-year rule. As the Seniors, including Captain Osipowich, Bob Driscoll, Elliott Jones, Emerson and Tinker, were the strength of the team, Coach Grant had not much left when they were not allowed to compete.

Each of these ineligible men had had three years of intercollegiate swimming. Under the rules of the New England Intercollegiate Association they could not swim more than three years, so they were barred from swimming in meets with colleges which belonged to the association. As they could swim in other meets they won the first from Connecticut Agricultural College without much difficulty, but lost to Rensselaer by the close score of 37 to 40, before they were forced to retire from the ranks of competitive swimmers. The good showing Tech made in these two meets was entirely due to the retiring Seniors, with a special spotlight for Captain Johnny Osipowich. However, in the following meets Coach Grant had to present an entirely new team. This team was composed mostly of Juniors and Sophomores, since the Freshmen were also ineligible for the varsity.

The first opportunity this revamped team had to show its strength was in the meet with Wesleyan, but its strength was only a few horse power in comparison with the smoothly working Wesleyan team. The score was 50 to 26, but this meet served to indicate wherein the team's strength lay.

The Williams meet was the same story rehearsed. The Williams swimmers completely overwhelmed the rather inexperienced Worcester swimmers. The Bowdoin and Amherst meets were much the same except that in the Bowdoin meet the partners in diving, Fogg and Fish, showed excellent form to take first and second places in that event, respectively. The swimmers sank to their lowest depth in the Amherst meet, losing 58 to 19.

The last meet of the season was with Springfield, and Henry Franklin took this last chance of showing Coach Grant how fast he could go and turned it into two fine victories, one of them while establishing a new pool record for the 220-yard free style swim. This meet ended with Tech on the short end of a 48 to 29 score.

Prospects for next year's team appear to be good. In addition to most of the team which composed the varsity the latter part of the season, the freshman swimmers will be on hand. Perhaps the most promising of those is Dick Falvey; he has been improving all season and should show up well next season. Another promising Freshman is Plum Wiley, a distance swimmer.

Those of the varsity who are quite certain to do well next year are Franklin, McElroy, Joe Fogg, and Ev Fish. In addition there are McMahon, Frary, Borgatti, Ratkiewicz, and Bissel.

Quite different has been the record of the freshman team. The Freshmen have not, however, had any too stiff competition. Most of their meets were with local high school and Boys' Club teams. Their record shows only two losses and one tie against several wins. They won all their meets against local competition with comparative ease. Among their victims was Commerce High of Worcester, which they defeated easily, taking nearly every first and second place. They beat the Worcester Boys' Club

## INDOOR TRACK TEAM COMPLETED VERY SUCCESSFUL SEASON

**Tech Relay Quartette Defeated but Once while Team as Whole Wins Both Dual Meets**

team by the score of 36 to 23, Plum Wiley and Captain Tom McNulty taking highest honors.

The team encountered little serious difficulty until it came up against the strong Whitinsville Junior team. This meet went to Whitinsville 34-28 when they ran off with the final race, the relay. The next week the Freshmen met the Whitins team again; again the final relay proved the Tech team's jinx. The Freshmen lost that race by a few inches. But it was enough to give the Whitins team eight points and a 31 to 31 tie.

The final meet was with the Gardner High team. That team, apparently having the power of a college team, sunk the Tech freshman team with the same ease that it has conquered every other team it has met this season.

Besides Falvey and Wiley, the freshman team has several swimmers who show exceptional promise. Tom McNulty is a strong swimmer who specializes in the backstroke; in the same specialty is his cohort, Merriam. Others are Bergstrom, Sleeper and Force.

#### E. E. DEPT. NOTES

It has been proven many times that the research work of the senior students in this department, is on most advanced stages of electricity. Prof. Morgan cites, as an example, the thesis which Edward Milde is working on.

He is constructing an Electro-Static generator, of which much has yet to be found out. He intends to do some experimental research work with it, and, if possible, to perfect it further.

The general description of the construction of the generator is quite simple. The apparatus consists of two electric motors, a silk belt, two copper spheres, some other odd parts and a very definite and practical method of putting them together. The silk belt runs through slots in the two spheres, and is driven by the motors. The silk belt is charged with static electricity by contact with glass, amber or any other material which proves itself most efficient. This charge is taken from the belt within the spheres by a complex process, which needs simplifying. These generators are supposed to be able to produce about 1,500,000 volts, but Milde expects only about a third of that amount.

Some of the scientific magazines have done quite a bit of exaggerating on the power of these generators. There is quite a field open for a machine producing high voltage, but it must be practical and efficient. The testing of insulators and loading capacity of cables require the use of very powerful currents.

We expect to get more definite data on experiments with this unique generator, at a later date.

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### WEALTH OF MATERIAL PROMISES FINE RECORD FOR OUTDOOR SCHEDULE

By winning a thrilling relay race from Brown on Saturday, March 12, the Tech indoor track team wound up its highly successful season. The relay team came out victorious in three out of four attempts, while the track team as a whole turned in two overwhelming wins to top off the list.

Boston University was the first to taste defeat at the hands of our speedy relayers, in a dual event held at the K. of C. games in Boston on January 30. The Colby quartet was then met twice, with the Engineers winning the first race and losing the second, for the only defeat of the year. On February 27, the track team held a dual meet with Boston University on the local floor and proved their superiority conclusively by trouncing the Boston boys, 59-18. In the second and last dual meet of the season, Mass. State was defeated by almost as large a margin, the score being 49-23. The relay victory over Brown completed the season's record.

The speedy relay quartet was composed of Captain Francis Sullivan, a Senior, Harry Jensen, Paul Sullivan, and Charles Egan, with Olof Nyquist taking the place of Egan in the first race. All of these men will be back next year with the exception of Captain Sullivan and Nyquist, so that next year's team should be as successful as the present one. In addition to the sterling work of these five men in the regular track meets, Buell and Whitcomb turned in two first places, in the mile and the high jump respectively, while Lyman, Doyle, and Granger came through with a first and a second apiece.

The work of the entire team deserves commendation for its fine record, and it is hoped that Coach Johnstone's team will show up as well in the spring schedule.

#### PHYSICS DEPT. NOTES

Dr. Ewell of the Physics department is giving a series of lectures at M. I. T., on refrigeration. He is also directing lines of research there, on more extensive developments in refrigeration. Dr. Ewell is one of the leading authorities on this subject in the country, and we are proud that he calls Tech, "home."

Members of the Physics department have heard from Mr. Stephenson who was an instructor here last year. He is now on the staff of the University of Chicago, and wishes to be remembered to his friends at Tech.

Dr. Duff recently received a letter from Mr. Beth, a graduate and former instructor. Mr. Beth is now studying at University of Frankfurt-on-Main, for a Dr. degree, which he hopes to receive at an early date.

Mr. Dow expects to put in full time, next year, at Harvard. He has a doctor's degree for his goal.

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